



Artist's concept of the International Space Station.

**Scheduled launches for International Space Station assembly include three Army astronauts shown below:**



**Williams**

**Lt. Col. Jeffrey Williams**

- STS-101, Space Shuttle Atlantis
- Third ISS assembly flight mission
- Scheduled liftoff Aug. 5, 1999



**McArthur**

**Col. William McArthur**

- STS-92; spacewalk outside the Space Shuttle Discovery
- Fourth ISS assembly flight mission
- Scheduled Oct. 28, 1999.



**Voss**

**Col. James Voss**

- STS-100
- Eighth ISS assembly flight mission
- Scheduled April 20, 2000

## Endeavour, astronauts home for the holidays



(NASA Photo)

Army Astronaut Lt. Col. Nancy Currie (second from left ) gives a thumbs up with fellow crew members after Space Shuttle Endeavour landed Dec. 15, at Kennedy Space Center. Currie is one of the Army's seven astronauts assigned to the U.S. Army Space Command, with duty at Johnson Space Center, Houston, Texas.

**Johnson Space Center, Houston, Texas**—NASA's final Shuttle mission of 1998 came to an end Dec. 15 with the landing of Space Shuttle Endeavour at Kennedy Space Center. Following a 4.6 million-mile journey, STS-88 Commander Bob Cabana guided the orbiter down onto runway 15 with landing gear touchdown occurring at 9:54 p.m. CST.

While Endeavour is back on firm ground, 246 miles above, the new International Space Station, or ISS, continues to orbit with all systems functioning normally. The current orientation of the ISS has the Unity module facing the Earth and the Zarya module facing deep space. The station is also in a slow rotation at one revolution every 30 minutes to maintain the proper heating and cooling. The next shuttle assembly mission to the station is STS-96, scheduled for launch aboard Discovery in May.

The STS-88 crew are Cabana, Pilot Rick Sturckow, Mission Specialists Nancy Currie, Jim Newman, Jerry Ross and Sergei Krikalev.

In a historic moment, Cabana and Krikalev swung open the hatch between the Endeavour and the First Element of the International Space Station Dec. 10.

Army Astronaut Lt. Col. Nancy Currie, assigned to the U.S. Army Space Command and SMDC, was the

mission specialist who controlled the robotic arm which connected the Zarya module to the Unity module, which make up the first components of the ISS.

"I think to have long-duration science on board the International Space Station is extremely important," Currie said, in a recent interview held at the Johnson Space Center. "The other thing is that as we look beyond space station, and as we look to a mission to Mars, for example, still to this day the single limiting factor is human physiology during long-duration spaceflight.

"So I think we need to have a greater understanding of the effects of long-duration spaceflight on the human physiology and any types of countermeasures that we might be able to impose on crewmembers that might lessen those effects when they do reach the surface of Mars," she said.

The STS-88 astronauts completed the first steps in the orbital construction of the ISS. In all, it took Jerry Ross and James Newman three space walks totaling 21 hours and 22 minutes to complete the initial assembly of the station.

Three other Army astronauts are scheduled to participate in upcoming Space Shuttle launches. Lt. Col. Jeffrey Williams will be on mission STS-101 in the Space Shuttle Atlantis, scheduled for liftoff Aug. 5, 1999. STS-101 is the

third ISS assembly flight. Col. William McArthur is scheduled to conduct a spacewalk on mission STS-92 outside the Space Shuttle Discovery. That mission, the fourth ISS assembly flight, is scheduled for Oct. 28, 1999. Col. James Voss, who speaks Russian fluently, will be on the eighth ISS assembly flight, mission STS-100, scheduled for April 20, 2000. The Atlantis will carry a multi-purpose logistics module in its cargo payload.

ISS flight controllers at Mission Control, Houston and at the Russian Mission Control Center in Korolev, outside Moscow, will now spend the next five months monitoring the station's systems and awaiting the launch of Discovery on the STS-96 mission. STS-96 will see a multinational crew of seven astronauts return to the station in a logistics resupply flight which will include at least one spacewalk to attach additional hardware to the new orbiting facility.

The Space Shuttle and two types of Russian rockets will conduct 45 missions to launch and assemble the more than 100 elements which will comprise the completed ISS. In all, 460 tons of structures, modules, equipment and supplies will be placed in orbit by the year 2004.

The ISS continues the largest scientific cooperative program in history, drawing on the resources and scientific expertise of 16 nations.



# Commanding General's Comments

At the end of the year, it's time to count our blessings. In our culture, most of us do this with the help of several important holidays.

These holidays have both material and spiritual elements to them.

The material aspect has tangible value to many of us, especially children. The spiritual side is often overlooked amid the materialism and frivolity of the season, but ultimately is the more important and lasting part that helps us end one year and prepare for a new one.

At SMDC, there are many parallels to our personal year-end experiences. Materially, we are producing many space and missile-defense products that will help joint ground warfighters win the battles of the 21<sup>st</sup> century, such as:

- Space Games that bring together experts from the National Security Council, DoD, National Reconnaissance Office, Joint Staff, combined commands, other services, industry and academia to fight space and missile defense battles realistically in the 2025-based scenarios;
- the Space and Missile Defense Battle Lab activities that bring together technologists and warfighters to find rapid solutions to warfighting requirements;
- deployment of the Theater Missile Defense Force Projection Tactical Operations Center, which is now part of the Army Air and Missile Defense Command;
- development of a near-term kinetic energy weapon using leap ahead radar technology to command guide a 2.75-inch missile that can destroy low radar cross-section threats at low and medium altitudes, such as cruise missiles, short-range ballistic missiles, and unmanned aerial vehicles;
- development of the Tactical High Energy Laser, or THEL, as a potential weapon against missiles, rockets and tactical air targets;

- development of the Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System, or JLENS, to explore the use of elevated, tethered sensor platforms to increase warfighters' ability to detect and track cruise missiles;
- deployment of the first Joint Tactical Ground Station, or JTAGS, production units in support of CINCPAC and CINCEUR. JTAGS is the only in-theater system capable of receiving, processing and disseminating ballistic missile early warning and tracking information on the battlefield.
- one hundred percent success in providing Joint Ballistic Missile Targets for testing of advanced missile defense systems; and
- two successful seeker fly-by tests of competing versions of the Exo-atmospheric Kill Vehicle, which is the heart of our Nation's future National Missile Defense System.

Regarding the spiritual aspect, although we all have our own personal beliefs, we can and should share common values that guide how we interact with our fellow employees. In turn, the way we practice these values collectively determines the true value of SMDC.

It doesn't take a lot of values to have a significant impact on the workplace; it just takes practicing a few important ones.

Loyalty to each other and to SMDC is very important, because it gives us a sense of family. However, as the leader of SMDC, I know that loyalty is more than a one-way street and must be reciprocated from subordinates to leaders, leaders to subordinates, and peer to peer.

Loyalty also contributes to a second important value, trust. If people are loyal to each other, a sense of trust develops. In some ways trust is a leap of faith, but the more we all practice it, the easier the leap becomes.

Tolerance is another key value to practice in any



Lt. Gen. John Costello

workplace, especially in a melting pot like America. Tolerance of different physical characteristics and ways of thinking are both extremely important if loyalty and trust are to be earned and innovation encouraged.

Closely related to tolerance is consideration for others. Beyond tolerating differences, having the ability to be considerate towards different points of view, emotional needs and physical characteristics makes the whole work experience a lot more fulfilling on many levels.

And finally, respect is the desired end state that flows from first tolerance and then consideration of differences. Respect is ultimately the highest compliment one can receive.

That said, I want to emphasize that as I visit the many parts of SMDC I am extremely impressed with all of your achievements, but even more importantly, with the way you "live" the important values mentioned above.

Thanks for all your hard work and professionalism and may you enjoy a great holiday season.

## Army leadership says 'thank you' for sacrifices



Honorable Louis Caldera

*(The following is a joint message from the Honorable Louis Caldera, Secretary of the Army, and General Dennis J. Reimer, Army Chief of Staff.)*

During the holiday season, we often hear "peace on earth" in songs and see these words printed on greeting cards. Those of you in America's Army know

the high cost of peace.

Throughout our long and proud 223-year history, our soldiers have been asked to pay that price so that others may enjoy the benefits of peace.

Our Army's determination, our readiness, and our unique ability to go where we are needed, when we are needed are the best guarantees of peace that exist in the world today.

Whether you serve our nation on Active Duty, in the Army Reserve, in the Army National Guard, or as an Army civilian, you are a vital part of the Total Force.

You are a continuing source of hope for freedom-loving people around the globe and have helped bring peace throughout the world.

At this time, more than 20,000 of you are deployed in over 80 countries, including more than 7,000 in Bosnia, where you are helping to keep peace in that troubled region.

You personify the Army core values,

which are the defining characteristics of the American soldier: Loyalty, Duty, Respect, Selfless-Service, Honor, Integrity, and Personal Courage.

Values are your credentials, just as you are the nation's credentials, both at home and around the globe. To those of you serving the nation far from home this holiday season, as well as to you serving within our country's borders, we say 'thank you' for your contributions and sacrifices.

Our nation is blessed with a tradition of religious freedom and tolerance, reflected today in our acceptance of and respect for the wide diversity of religions and cultures in our nation. May each of you enjoy a meaningful and joyous holiday season according to the tradition that you and your family hold dear.

We wish all of you and your families a happy, safe, healthy, and peaceful New Year in 1999, as we begin the countdown to the new millennium.



General Dennis J. Reimer

“  
**You personify the Army core values, which are the defining characteristics of the American soldier.**”

### The Eagle

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# Altair is prepared for next millennium

*Altair Engineering  
exterminates Y2K bug*

by Harry Fitzpatrick  
Reprint from *Kwajalein Hourglass*

The Altair radar is easily visible at Roi-Namur, with its 150-foot-diameter antenna rising high above the palm trees. Altair is 470 tons of antenna, 12 megawatts of power, signal processing and a computer system with software capable of supporting the radar's diverse mission assignments.

Mostly, however, Altair is a cadre of dedicated and capable operators, engineers, analysts, technicians, and maintenance personnel.

Like a popular restaurant chain in the states, Altair never closes. It is open for business 24 hours a day, 365 days a year. Only 15 minutes notice is required for the radar to be up and tracking.

With its wide very high- and ultra high-frequency beams—the largest of any in the Kwajalein Missile Range complex—Altair can provide data not available from other sensors.

With a single pulse, Altair can detect a metallic object the size of a volleyball as far away as New York is from San Francisco. It also can add up the returns from many pulses to track satellites at longer ranges.

Altair is usually the first sensor at the missile range to see launches come over the horizon from Vandenberg Air Force Base, Calif. It identifies re-entry vehicles, payloads, and decoys and provides steering data to the rest of Kwajalein.

Two years ago, Altair Engineering began work on the millennium bug—the year 2000 problem that concerns computer experts worldwide. The problem, in a nutshell, is that unless their code is changed, computer systems using the two-digit system for denoting years are expected to interpret Year 2000, or 00, as 1900, and crash; losing vital data.

## Five phases of compliance

Awareness, assessment, renovation, validation and implementation are the five phases of Y2K compliance.

Awareness was easy: “Boy, we really have a problem here—1.2 million lines of home-grown code.” Assessment verified that about 200 changes had to be made to Altair software. As fixes were unit-tested by Altair Engineering, they were submitted for baseline updates. Finally, Altair had a system that worked in current time and was also ready for Y2K testing, or validation.

Altair engineers implemented two capabilities to support testing—*cocooning* and *warping*. Altair sometimes has to protect sensitive data by severing lines in and out of the site and switching to special operational disks. This capability, called cocooning, was used in this case to protect the baseline data base and other missile range sensors from test data. A copy of the operational data base was brought into the cocoon.

The next problem was that current time data were useless when system clocks in the cocoon were set ahead to Year 2000 and beyond. Altair needed to be able to use the data base to find specific satellites. Data base warping was the answer.

Individual element sets—data that tells the software where satellites are—were brought forward in time and warped by changing the right ascension. In this way, valid Year 2000 tracks and data base operations could be verified.

## Testing is completed

Basically, Altair has two customers: the missile range at Kwajalein, run by the U.S. Army Kwajalein Atoll, and the Space Control Center at Cheyenne Mountain, Colorado Springs, Colo. Y2K compliance had to be demonstrated to both customers.

During October and November, Altair successfully participated in combined Kwajalein Missile Range and Y2K testing in which clocks were set ahead



(Army photo)

**Altair is 470 tons of antenna, 12 megawatts of power, signal processing, and a computer system with software capable of supporting diverse mission assignments...and it is Y2K compliant for the next millennium.**

throughout the atoll. Data were successfully exchanged with Kwajalein's mission control center and other sensors, and were sent to the States for verification of format and accuracy.

Cheyenne Mountain, Altair's primary customer based on number of tracks, was also ready for integrated testing. Another series of Y2K tests was performed in October to test the Space Command network, of which Altair is a member. Altair cocooned, warped and successfully exchanged track data and other operational messages with the test system at Peterson Air Force Base in Colorado Springs.

## Advantageous view of foreign launches

Launches, especially military ones, from other countries are of vital interest to America. Altair is always on 15-minute recall for new foreign launch support. It can see more than 60 percent of Russian launches 25 minutes after launch; more than 90 percent of Chinese launches 17 minutes after launch;

and all Japanese launches 11 minutes after launch. Usually, it is Altair that provides Space Command with the first radar data on these launches.

In addition to near-Earth initial coverage, Altair is the first radar in the Space Surveillance Network to have visibility of all Russian, Chinese and Japanese launches in their deep-space-transfer orbits, and the only sensor that covers the injections of these launches into synchronous orbits. Without this coverage, other Space Surveillance Network sensors would have to spend many hours searching for newly launched foreign payloads.

This new foreign launch capability was also tested in the Y2K program. The warped data base was used to prove the KOR capability (known object recognition) will still work in the new millennium. The KOR procedure keeps Altair from tracking known satellites when searching for a new launch.

Altair has completed internal testing and validation. Next comes an independent review and certification, to be completed this month.

Altair is ready.

# Test facility awards million dollar contract

by LuAnne Fantasia  
Huntsville, Ala.

A \$1.5 million contract was awarded to Tresco, Inc., in Las Cruces, N.M., in late November. The basic contract with four one-year options provides jobs for about 37 full-time, disabled and non-disabled employees at the command's High Energy Laser Systems Test Facility, or HELSTF, at White Sands, N.M. The isolated test site — operating the nation's most powerful laser in support of DoD's laser research, development, test and evaluation—had no flexibility for restructuring or remodeling the infrastructure to accommodate disabled employees. "Initially, this was a major concern,"

said Col. Larry Anderson, deputy director of the Missile Defense and Space Technology Center here. Anderson was the commander of HELSTF during contract negotiations, before reassignment here this summer. Lt. Col. Ron Nelson is HELSTF's new commander. "Because of the structure and use of the buildings at HELSTF, we did not have the option of cutting new doors and installing elevators and ramps," Anderson said. "But the Tresco corporation provides work for their people in an environment as it exists." Anderson said about a year ago, the command's small and disadvantaged business office, or SADB, contacted him in New Mexico and asked him to meet with

Walter Cramer, operations manager at NISH (National Industries for the Severely Handicapped). NISH is a non-profit organization working directly for the federal government, acting as a liaison for the president's committee for disabled Americans. The organization represents many companies such as Tresco, Inc. Anderson said, "Tresco appeared to be cost-efficient and their employees could fill over one-third of the contractor jobs at HELSTF." Those jobs include the snack bar, grounds maintenance, shipping and receiving, machine and carpentry shops, administrative functions and other base support positions. Over a five-year period, the Army is looking at a savings of about \$800K," Anderson said. "That was my point of view as a manager, but there are other

benefits." The contract supports the local economy and community and its special programs, and it employs disabled people who might otherwise be unemployed. Tresco also is a non-profit company whose small fee on contracts such as this provides funding for the local disabled vocational school in Las Cruces. "NISH is dedicated to helping these people work, and Tresco, Inc. is one of the more aggressive companies," Anderson added. NISH's operations manager, Walter Cramer said, "Opportunities for people with disabilities to take on these types of jobs represents opportunities for people to get off welfare, and to earn an income. With the HELSTF project, that's exactly what these people will get."

# AUSA symposium keys on latest space, missile defense issues

by Marco Morales  
Huntsville, Ala.

More than 700 people from the Association of the United States Army, the U.S. Army Space and Missile Defense Command, defense industry organizations and Fort Bliss, Texas, attended and participated in exhibits at the eighth Annual AUSA Space and Missile Defense Symposium Dec. 2-4, 1998, in El Paso, Texas. Opening remarks for the symposium included those of Gen. (ret.) Gordon R. Sullivan, president of AUSA, Lt. Gen. John Costello, commander of SMDC, and El Paso Mayor Carlos Ramirez. Their greetings to both exhibitors and attendees set the tone for presentations on the latest space and missile defense issues by keynote speakers. "It is indeed a pleasure to address the eighth annual space and missile defense symposium," said Admiral Harold W. Gehman, Jr., commander in chief, U.S. Atlantic Command. Gehman spoke about two issues that he believed were relevant to the symposium — joint requirements and the joint experimentation process. "Not long ago, it was generally agreed that only services could establish requirements — not so anymore," Gehman said, adding that the Chairman of the Joint Chiefs of Staff recently approved a Theater Missile Defense Capstone Requirements Document. This document, Gehman said, was developed by Atlantic Command in cooperation with the services, the other CINCs, the joint staff, and other important DoD agencies, such as the Ballistic Missile Defense Organization and the Joint Theater Air and Missile Defense Organization. "This first joint CRD is an important milestone on the path to jointness. It provides a way for joint warfighters' TMD interoperability requirements to compete on an equal footing with other requirements," he said. In reference to Joint Experimentation Process now being developed at his command, Gehman said,

"Jointness means much more than the mere interoperability of systems. It is the art of combining capabilities from different military services to create an effect that is greater than the sum of the parts. Jointness is an intellectual activity that people do. Interoperability is about what equipment does." Gehman also offered a bit of advice on the way procurement of missile defense systems has proven ineffective in the past. "To develop and acquire these key joint capabilities, we must stop repeating our present pattern of allowing services to procure systems sub-optimized to meet their unique service operational requirements, and then spending billions of dollars and years retro-fitting these systems in the field to be interoperable. We can no longer afford the inefficiencies of a system that brings non-interoperable systems together for the first time on the battlefield," he said. Other speakers included: Gen. Richard Myers, commander in chief, U.S. Space Command, "Space Support for the Future"; Maj. Gen. Daniel R. Zanini, deputy chief of staff for Combat Development, Training and Doctrine Command, "Future Army Space Requirements"; Maj. Gen. Morris J. Boyd, deputy commanding general, III Corps & Fort Hood, "Space and Force XXI"; Brig. Gen. Michael Hamel, commander, Space and Missile Systems Center, "Air Force Space Support to the Warfighter"; Rear Admiral Phillip M. Balisle, vice commander, Naval Sea Systems Command, "Theater Missile Defense Vision"; Maj. Gen. Dennis D. Cavin, commanding general, U.S. Army Air Defense Artillery Center and Fort Bliss, "Air and Missile Defense Solutions for the XXI Century"; and Brig. Gen. Daniel L. Montgomery, program executive officer for Air and Missile Defense, "Missile Defense — Future Systems Development."



(l to r) Lt. Gen. John Costello, Maj. Gen. Dennis Cavin, and Brig. Gen. Daniel Montgomery converse during a break at the symposium.

Another keynote speaker, Lt. Gen. Lester Lyles, director, BMDO, expressed concern over the rising costs and schedule slips in the Patriot Advanced Capability-3, Navy Area Defense and Theater High Altitude Area Defense programs. "We cannot hold costs down, we cannot hold our schedules, we cannot perform," he said. Lyles also stated that problems with TMD programs are making him use resources normally targeted for technology programs. "I have no latitude within the dollars I have but to take it away from the only discretionary area I have — technology. I am robbing the future." Lyles further stated that "deeds, and not words," are the only way to "turn this around." The symposium was also highlighted and filled by other events which coincided with the busy two-and-a-half day agendas, including the National Aeronautical and Space Administration's launching of STS-88, signing of the Tresco contract at the High Energy Laser Systems Test Facility, induction of Lt. Gen. John Costello into the Air Defense Artillery Wall of Honor at Fort Bliss, and a dinner with the Honorable Roscoe G. Bartlett, member, House National Security Committee, as guest speaker. The exhibits were showcased by participating defense industry representatives. Static displays of air defense artillery missile defense systems also enhanced El Paso's outdoor Civic Center architecture including the "Sentinel" and Patriot Advanced Capability-3 systems and a SCUD missile which has become part of the U.S. military's inventory following the Persian Gulf war. Approximately 1,500 visitors from El Paso and surrounding communities visited the exhibits. Mayors Loretta Spencer, Huntsville, Ala., and Chuck Yancura, Madison, Ala., also attended the symposium.



# Low cost application can save thousands of dollars

by **LuAnne Fantasia**  
**Huntsville, Ala.**

A new conductive ink currently being developed will cost only a few dollars to protect an entire electronic system.

Funded by Army small business innovation research funds, or SBIR, the Ormet Corporation in Carlsbad, Calif., recently received the “Materials 1998 SBIR Technology of the Year” award for the Phase II development of this technology.

“A circuit board can cost from \$200 to thousands of dollars,” said Mark Brown, an electrical engineer in the advanced technology directorate here. He is a technical contract monitor for SBIR efforts for the U.S. Army Space and Missile Defense Command.

“When a circuit board is coated with the conductive ink at the time it is built, it reduces the chances of damage done by electromagnetic interference, which reduces the need to rebuild the board or the entire electronic system.

“In this industry, where everything has an electronic system, that can save a lot of money,” he said.

Brown said the military needed an inexpensive

electronic protection. “Ormet’s product will probably become a standard, which will make it more cost-effective for military and civilian markets.”

Phase III of the contract—where the commercial product is delivered to customers—is normally funded with money other than Army SBIR dollars, Brown said.

## What is Ormet doing?

Brown said, in 1996, the advanced technology directorate—part of the Missile Defense and Space Technology Center—initiated an SBIR topic with the Army to develop a widely-applicable, low-cost technology that would lessen the damaging effects of both radio frequency and electromagnetic interference.

“Ormet’s was the first effort under this topic to go to a Phase II SBIR, which is where a prototype product, suitable for commercial use, is developed,” Brown said.

He said the conductive spray-on coating Ormet corporation is developing can be applied directly on circuit boards, can be cured at a temperature of 165 degrees Celsius, and is compatible with a wide range of electronic circuits.

“Standard conductive spray wears down over age, which is okay for some needs,” Brown said. “But Ormet’s sintering process is a heat process that melts liquid particles together, making the coating permanent. Anything I can spray it on and heat to 165 degrees, I can protect,” he added.

Because the conductive spray’s shielding effectiveness reaches into the gigahertz frequency range, it will allow commercial-off-the-shelf electronics to operate in a military radio frequency environment.

“Basic commercial and several military communications and radar systems operate in the 100 kilohertz to 1 gigahertz range,” Brown said.

“Sometimes this causes interference with commercial electronics, but once this conductive spray becomes standard, commercial and military [systems] should be able to operate in the same frequency environment.”

The advanced technology directorate also monitors about a third of the SBIRs for the Ballistic Missile Defense Organization.

“Since 1996, the advanced technology directorate has bundled Army and BMDO SBIR contracts,” he said. “We wanted to focus our efforts in order to provide both organizations with useable end products.”

# Infobytes

## Apply now for ‘99 Space Camp Scholarships

Hey kids! Roll and pitch in the *five degrees of freedom chair*. Spin in the *multi-axis trainer* and experience the disorientation astronauts feel during a tumble spin reentry into the Earth’s atmosphere.

Apply now for a scholarship to the U.S. Space Camp, including full tuition, transportation to and from Huntsville, Ala., a flight suit, and team video. Every year the Army Space and Missile Defense Association offers these scholarships to family members of active duty military and civilian employees of the U.S. Army Space and Missile Defense Command, the PEO-AMD, and Fort Bliss, Texas.

Scholarships are awarded based on financial need and scholastic achievement. The application package is on the command Intranet, **<http://intranet/Docs/PubAff/PA.htm>**. Completed applications should be mailed to the address below not later than Jan. 15, 1999, for sessions before July 30, and not later than May 29, for sessions after July 30.

Mr. Robert A. Brown  
ASMDA Scholarship Committee  
c/o SY Technology, Inc.  
654 Discovery Drive  
Huntsville, Ala. 35806

Questions? Call Gerda Sherrill, SMDC public affairs office, (256) 955-3888.

## VA toughens refinancing rules on home loans

by **Staff Sgt. Michael Wetzel, USA**  
**American Forces Press Service**

WASHINGTON — New regulations are due by the end of the year to curtail money lenders preying on veterans seeking to refinance their VA home loans.

Homeowners, including many service members and veterans, are flocking to take advantage of the lowest interest rates in 30 years, said Keith Pedigo, director of the VA Loan Guarantee Service here. Some lenders, however, are using aggressive and unfair marketing practices to turn a deal for the veterans into a deal for themselves.

He said the new rules require every interest rate reduction refinancing loan to show a decrease in the principal and interest payment. Plus, he said, if payments on the current loan are more than 30 days past due, the VA must approve the refinance.

“Currently, we do not require an income verification, a credit report or an appraisal to make these kinds of loans, Pedigo said. “Under the new rules, we would require that [the loan] be submitted to the VA and we would subject that loan to a credit and income review before deciding whether or not to approve it.” Issues include whether the borrower is a satisfactory credit risk and has sufficient income to make the mortgage payments.

The new, tougher rules stem from practices VA officials were seeing in the refinancing market. “We detected that there were some lenders who were allowing veterans and active duty members to skip payments on their current VA loans and to roll those delinquent payments into the new loan,” Pedigo said. “The [rollover] increased the amount of the new loan, in some instances far above the balance of the old loan.”

Some lenders even encouraged VA loan holders to spend the skipped mortgage payments on a car or a vacation, he said, and others slipped in excessive closing costs. In still other cases, he added, “The actual mortgage payment for these veterans was going up, even though the interest rate was going down.”

Only a few of the more than 5,000 lenders who do business with the VA have been found using these marketing tactics, Pedigo pointed out. The vast majority do not, he stressed, but even then, VA loan holders should shop carefully.

“We know of literally thousands of instances every year where veterans get a better deal by doing their homework,” he said. “My advice to anyone who’s either buying a home or [refinancing it] would be to spend some time, do some comparative shopping and make sure you get the best deal that’s available to you.”

About 20 percent of the loans the VA guarantees each year go to active duty service members, Pedigo noted.

## DoD announces uniform Tuition Assistance policy

by **Jim Garamone**  
**American Forces Press Service**

WASHINGTON — The cost of continuing your education just got cheaper.

A uniform tuition assistance policy affecting all the services went into effect Oct. 1, Pentagon officials said. All services now pay 75 percent of undergraduate and graduate level tuition and related

costs up to ceilings of \$187.50 per semester hour and \$3,500 per year, said Otto Thomas, DoD director of continuing education.

In the past, the services had individual tuition policies. Soldiers, sailors, airmen and Marines could be in the same college class and yet be reimbursed differently. The services also had established different amounts they would pay for different college levels.

“One service, for example, might pay a certain amount for undergraduate work and a different amount for graduate work,” Thomas said.

Another service even broke that down, paying less for freshman and sophomore level courses than for junior and senior courses. The uniform approach was recommended in the October 1995 Quality of Life Task Force Report, also known as the Marsh Report, after the group chairman, former Army Secretary John O. Marsh.

## Soldiers’ and Sailors’ Relief Act

by **Paul Stone**  
**American Forces Information Service**

An active duty soldier takes up residence in the city outside his new duty station. When he registers his car, the city clerk tells him he also owes \$300 in personal property tax. But does he?

An airline pilot gets called up for a six-month reserve tour flying missions over Iraq, and her lower military pay isn’t enough to cover all her bills. Will reserve duty mean financial ruin?

For the answers to these money questions and other legal issues, see the American Forces Press Service Special Report on the Soldiers and Sailors Civil Relief Act at [www.defenselink.mil/specials/Relief\\_Act/](http://www.defenselink.mil/specials/Relief_Act/).

## Military strength figures published for calendar year 1998

### DoD News Release

The total numerical strength of the Armed Forces on Oct. 31, 1998 was 1,396,430. This is a decrease of 10,400 from Sept. 30, 1998 and a decrease of 35,083 from Oct. 31, 1997.

These figures represent full-time military personnel comprising both regular and reserves on active duty and officer candidates, including cadets at the three military academies.



(Photo by Ed White)

**Members of the ARSPACE resource management and contracting team are (l to r, back row): Mark Pitra, Bryan Sasaki, Heather Dillard, Eric Gresh, Tom Callaghan, Randy Wrampler, Daryll Nottingham. Left to right, front row: Chris Romero, Jennifer Greiner, Diann Gilmore, Karen Clark, and Diane Rayburn. Not pictured: Brent Mathison, Bob Nyquist.**

## There is no ‘I’ in teamwork

by Ed White  
Colorado Springs, Colo.

If someone asked Resource Manager Tom Callaghan, “Hey buddy, can you spare a dime?” the answer would be no. At the end of the budget year, Army Space Command had only seven cents left in its coffers.

ARSPACE provides support to multiple, diverse organizations around the world, from the President of the United States to the soldier in the foxhole. It operates on a one-year appropriation, Army operations and maintenance, to provide the support required by the worldwide elements.

Two key organizations within ARSPACE supporting these missions are the deputy chiefs of staff for resource management and contracting. Year-end close-out highlights the talents of these organizations, which cumulatively amount to 250 years of experience in fiscal management.

“The year-end event is the climax of activities that start with the development of the integrated priority list, which establishes missions and initiatives to be pursued throughout the year, their budgetary requirements and relative priority of execution,” Callaghan said.

Future mission requirements and historic pricing aid in the development of out-year budget projections. Effective use of funding provided organizations favorable standing in terms of consideration of out-year funding requirements.

The role of resource management and contracting is unique within ARSPACE. These organizations assist in the formulation of mission execution plans. Contracting looks for effective means of execution, whereas resource management ensures the legality, fiscal responsibility, and proper accounting of the proposed initiative.

“Hand-in-hand teamwork is the key to the success of mission support within ARSPACE,” said contracting’s Daryll Nottingham. “We could never provide the level of support with the

ease and confidence we do without the understanding and mutually anticipatory relationship we enjoy.”

Program and budget reviews are combined with the ARSPACE Acquisition Planning Board. These forums meet periodically throughout the year to adjust existing requirements and entertain new requirements, in conjunction with the review of execution of the previously approved initiatives.

While there is an appearance that there is a major push at the end of the appropriations life (fiscal year end), activities are ongoing throughout the year. Given our limited budget, ARSPACE tries to get the biggest bang for its bucks. With that, the expenditure of each dollar is scrutinized to ensure each mission and requirement is satisfied.

Twenty million dollars is required annually to keep the doors of ARSPACE open. From there, major programs, including the defense satellite communications system and other communications missions, early warning, space surveillance, planning for component missions and bringing unique space expertise to the warfighter, require approximately \$30M annually.

About 40 percent of the annual budget is allocated and executed by contracting. The year- end products include technical support services, equipment acquisition, and operations and maintenance support services.

ARSPACE’s goal for funds remaining at the end of fiscal year ‘98 was \$0. Seven cents was left unspent. During the last month of the fiscal year, manpower requirements in these two organizations saw a 25 percent increase, which is not unusual.

“As with any good organization, it is the people that make the difference,” Callaghan said. “When you have the kind of people we do, ready to support, ready to assist and ready to be ready, it ensures success. Within our organizations, there truly is no ‘I’ in teamwork. We are simply doing our jobs.”

## Ops chief says Space is ‘booming business’

by Melva Tillar  
Colorado Springs, Colo.

“Until I came to Army Space Command I wasn’t sure how to spell space or satellite, and had no idea what I was getting into,” said Lt. Col. Robert Simmons, chief of the operations division. In 19 years in the Army, he had never heard of the U.S. Army Space and Missile Defense Command or its Army Space Command.

“My present assignment is by far the most challenging,” he said. “The biggest challenge is figuring out what space products are needed by the field—corps and division commanders. Once we do that, then we work on how to package it so it’s useful.”

Simmons said from the time he was 10 years old, he wanted to go to West Point. His father was in the Army and his older brother went to the academy. When Simmons did not get accepted to West Point directly from high school, he enlisted in the Army, completed basic training, and was accepted into the academy’s prep school program. The prep school, located at Fort Monmouth, N.J., offers qualified active duty, enlisted soldiers the opportunity to attend West Point.

“Not everybody I went through the prep school with received an appointment,” he said. “If they dropped out of the course or decided it wasn’t for them, they returned to their original units.”

Simmons received an appointment to West Point in 1972, but added, “I still appreciate my enlisted experience.”

In July 1996, Simmons became the second deputy director of the Space Battle Center, replacing retired Lt. Col. Rick Ferguson. John Marrs was the director.

“I appreciated the great opportunity to work for John Marrs,” Simmons said. “I learned a lot about space and appreciated his patience. John knows

space and is just an absolutely brilliant guy, and I don’t think I could have had a better job at Army Space Command walking in the door with very little background.”

In April of last year, Simmons became chief of the plans division. “That was really an eye-opening experience because the involvement was much greater than in the Space Battle Center,” he said. A typical day includes working with the National Missile Defense and integrating with U.S. Space Command, as well as space control and space surveillance.

Now as operations chief, Simmons discussed his goals at Army Space and in his future.

“I think, for the most part, my goals have been met. I would have been happy to remain in plans for the rest of my tour, but the opportunity to serve as operations chief will be a great experience and will allow me to pass on what I learned in plans. I’ll also gain a much greater appreciation for the integration of space forces and their products into the corps commands’ concept of operations,” he said.

Simmons realizes Colorado Springs is a great town for remaining in the space business.

“Space is a booming business. General Estes at CINCSpace, said, ‘It has become an economic center of gravity.’

“I’ll finish a master’s degree in space systems management next spring, where I augment what I’ve learned from day-to-day business here at Army Space. Everyday at Army Space Command is a learning experience,” Simmons said.

“ARSPACE is doing very good work, staying very busy. We need to continue to improve and provide an even better product, and do a good job of advertising ourselves not only to the corps, but across the Army as well.”



(Photo by Angela Gatti)

**Lt. Col. Bob Simmons (standing) confers with Capt. Tony Farris on an issue concerning the Mission Planning Rehearsal System. Farris is assigned to the Army Regional Space Support Team, or ARSST.**

## Porter is candidate for U.S. top volunteer

by Ed White  
Colorado Springs, Colo.

A thin, rangy man with eyes that seem always to be looking to the horizon, Mike Porter, retired U. S. Army pilot, has been selected as one of this country’s top volunteers.

Porter’s wife, Sandie, is an employee of the U.S. Army Space Command, here.

Another employee, and a good friend, Celia Milligan, nominated Porter for the award.

“Some people become heroes in a spontaneous moment of crisis, while others quietly and unceremoniously live lives of personal sacrifice to others,” Milligan said.

Porter was named one of America’s top volunteers for his dedication to the El Paso County Search and Rescue. Since 1992, he has served as president, mission coordinator and training officer. As mission coordinator, he has been on call 24 hours a day, seven days a week, logging over 4,000 volunteer hours in 1997 and over 1,000

hours of auxiliary volunteer hours.

Porter and his team of volunteers face life-threatening weather and treacherous terrain as they search for missing hikers, rescue stranded mountain climbers, recover the remains of fallen climbers or suicide victims, and assist police agencies.

The recognition for Porter comes from an organization called Bring Home the BAC-Os: Betty Crocker Salutes America’s Top Volunteers. Porter’s recognition takes the form of a \$1,000 award going to the El Paso County Search and Rescue. Should he be selected for the national level recognition, Betty Crocker will put up \$50,000 to causes supported by the outstanding volunteer.

“We know that every day there are ordinary people who do extraordinary things for their communities,” said Brian Dilsheimer, spokesperson for Betty Crocker.

“We’re delighted to be able to recognize the incredible contributions made by people like Michael Porter, and to contribute to the cause they support.”



Porter

(Courtesy photo)

*“Some people become heroes in a spontaneous moment of crisis, while others quietly and unceremoniously live lives of personal sacrifice to others,”*

-- Celia Milligan

## Lagesse has positive influence on people

by Melva Tillar  
Colorado Springs, Colo.

“Richard is good medicine. I look forward to his daily walk through our section. He always makes me laugh even on gloomy days,” said Sgt. Darrin Stallworth, at the Army Space Command personnel directorate.

Richard Lagesse, the equal employment opportunity officer at the Army Space Command here, is totally committed to equality, takes pride in his job, and inspires the cooperation and confidence of others. Lagesse promotes harmony and teamwork, displays an ability to motivate others, and possesses a personal magnetism.

Lagesse joined the ARSPACE staff about 18 months ago, when he and his family moved here from Arizona. His job is providing equal employment opportunity and equal opportunity to over 600 civilian and military members worldwide, including family members. He conducts training, site visitations, special events, and represents ARSPACE at local and national community functions.

“Richard has a unique gift of balancing the sobriety of his job with a playfulness that always

puts people at ease,” said Frieda Tata, from the command’s intelligence directorate. “But, behind that lighthearted veneer is a dedicated, skilled and knowledgeable professional.”

Lagesse’s background and experience includes: retired Air Force social action officer; technical consultant for the Office of Personnel Management on EEO issues; member of the Governor’s civil rights commission of Arizona; public speaker on the local, regional and national levels; college instructor, and marriage counselor. He has served in three branches of the U.S. military; the Army, Navy, and Air Force.

Sgt. 1<sup>st</sup> Class James Butler said, “My daughter said Richard is ‘good people’, and she is an excellent judge of character.”

Lagesse enjoys rock climbing, fishing, golfing, hiking, and his motto is “Don’t tell me NO!”

“Richard is a free safety; moving quickly and independently to eliminate or minimize misunderstandings and problems,” said Chief of Staff Col. Steven Bowman. “He provides expert counsel to the command, and more importantly, to the soldiers and civilian team members. Richard has been effective at promoting open communications and compliant resolution. And like many other Army Space team members, he gives freely during



Lagesse

(Photo by Angela Gatti)

his off-duty time to organize team building events.”

Title VII of the Civil Rights Act of 1964, as amended, instituted a policy to provide all people equal employment opportunity. The policy prohibits discrimination in employment because of race, color, religion, sex, national origin, age or handicap and promotes the full realization of equal employment opportunity.

Honors and awards ...

Lt. Gen. **John Costello**, Air Defense Artillery Wall of Honor; **Beth Andrews**, JLENS employee of the quarter; **Dottie White**, World Champion for Women’s Black Belt Fighting, North America.

Retirement ...

Col. **John Innes**, Lt. Col. **Lloyd Jordan**, **Helen Parcus**, **Norma Osborne**, **Wayne Simpson**, **Dr. Richard Fisher**, **Kay Smith**, and **Mike Pool**.



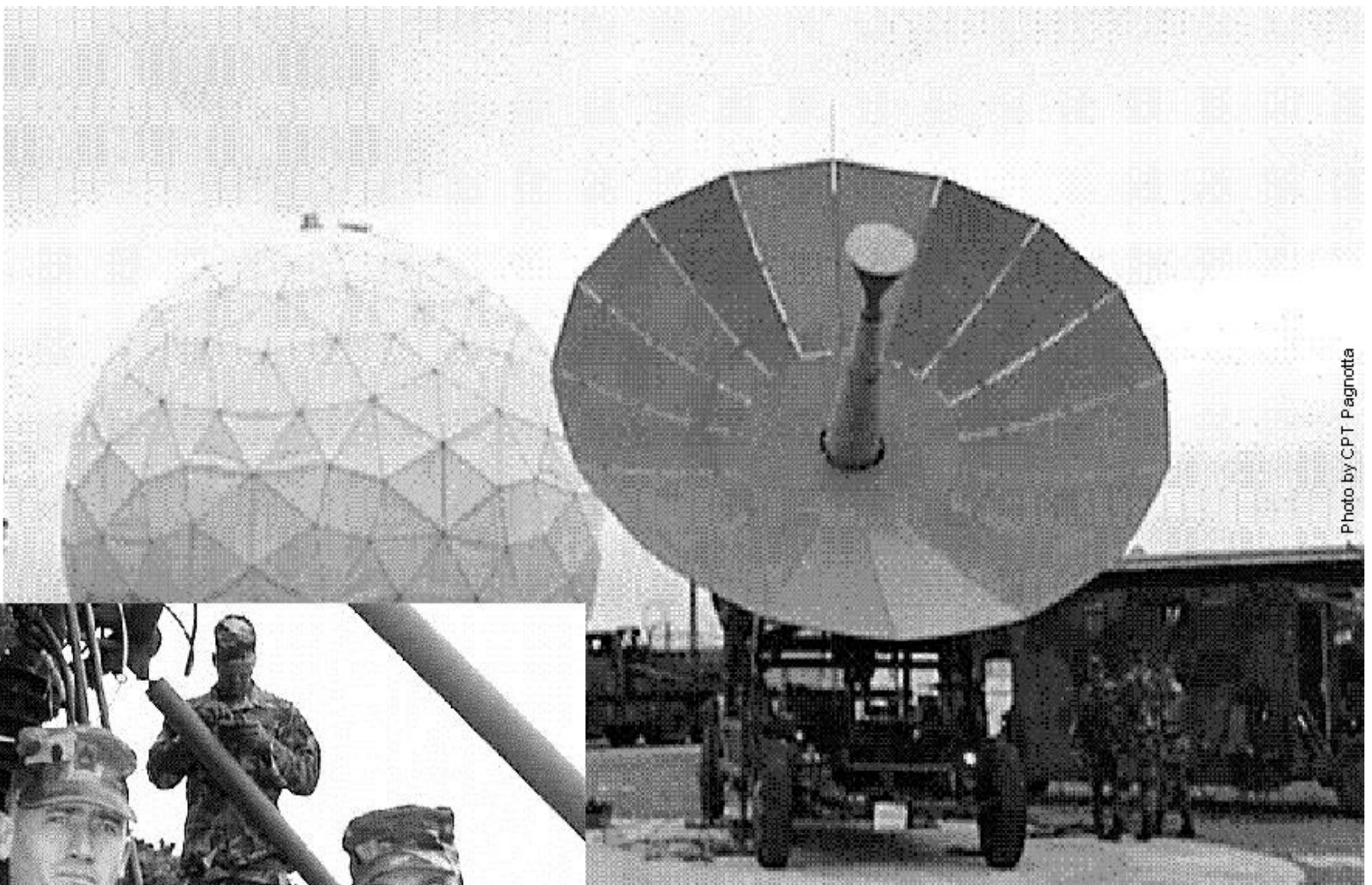


Photo by CPT Joe Pagnotta

Photo by Capt. Joe Pagnotta

**Echo Company, 1st Satellite control Battalion, Okinawa...**  
**Sergeants 1st Class Ben Pigsley (left) and Ralph Martin oversee operation and installation of the OE 361 Antenna. The OE 361 is an Air Force asset employed as part of joint training between Army Space Command and contingents. Incorporation of Air Force equipment adds to the total joint service proficiency of all soldiers involved. Echo Company, located on the island of Okinawa (Japan) often trains with joint service equipment and personnel as part of the total Armed Forces Concept.**

# A Soldiers Christmas

*(Author unknown)*

'Twas the night before Christmas, he  
lived all alone,  
in a one bedroom house made of  
plaster and stone.  
I had come down the chimney with  
presents to give,  
and to see just who in this home did  
live.  
I looked all about, a strange sight I did  
see,  
no tinsel, no presents, not even a tree.  
No stocking by mantle, just boots filled  
with sand,  
on the wall hung pictures of far distant  
lands.  
With medals and badges, awards of all  
kinds,  
A sober thought came to my mind.  
For this house was different,  
it was dark and dreary,  
I found the home of a soldier,  
once I could see clearly.  
The soldier lay sleeping, silent, alone,  
curled up on the floor in this one  
bedroom home.  
The face was so gentle, the room in  
such disorder,

not how I pictured a United States  
soldier.  
Was this the hero of whom I'd just  
read?  
curled up on a poncho, the floor for a  
bed?  
I realized the families that I saw this  
night,  
owed their lives to these soldiers  
who were willing to fight.  
Soon, 'round the world, the children  
would play,  
and grownups would celebrate  
a bright Christmas day.  
They all enjoyed freedom each month  
of the year,  
because of the soldiers, like the one  
lying here.  
I couldn't help wonder how many lay  
alone,  
on a cold Christmas eve in a land far  
from home.  
The very thought brought a tear to my  
eye,  
I dropped to my knees and started to  
cry.  
The soldier awakened and I heard a

rough voice,  
"Santa don't cry, this life is my choice;  
I fight for freedom, I don't ask for  
more,  
my life is my God, my country, my  
Corps."  
The soldier rolled over and drifted to  
sleep,  
I couldn't control it. I continued to  
weep.  
I kept watch for hours, so silent and  
still  
and we both shivered from the cold  
night's chill.  
I didn't want to leave on that cold,  
dark, night,  
this guardian of honor so willing to  
fight.  
Then the soldier rolled over,  
and in a voice soft and pure,  
whispered, "Carry on Santa, it's  
Christmas day,  
all is secure."  
One look at my watch, and I knew he  
was right,  
Merry Christmas my friend, and to all  
a good night.